

MATERIAL FOR THE FLORA OF MAHABALESHWAR

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[continued from Vol. 77 (3): 464]

BALSAMINACEAE

Impatiens Linn.

1. Plants scapigerous *I. acaulis*
1. Plants non-scapigerous 2
2. Flowers yellow *I. dalzellii*
2. Flowers pink or purple.....3
3. Herbs \pm 1 metre tall.....*I. pulcherrima*
3. Herbs \pm 0.5 metre tall.....4
4. Leaves alternate*I. balsamina*
4. Leaves opposite 5
5. Lamina with two glands at base
..... *I. kleinii*
5. Lamina without glands.....6
6. Pedicels glabrous
..... *I. oppositifolia*
6. Pedicels hairy 7
7. Hairs on pedicels rufous....
..... *I. tomentosa*
7. Hairs on pedicels not
rufous, only hairy lines....
..... *I. pusilla*

1. *Impatiens acaulis* Arn. in Hook. Comp. Bot. Mag. 1: 325; 1835; Dalz. & Gibs. 42; FBI 1: 443; Nairne, 43; Birdwood, 404; Woodrow, 11: 266; Cooke, 1: 170 (180); Santapau, 289 & 400; Puri & Mahajan, 120.

I. scapiflora Hook. in Bot. Mag. 64, t. 3587, 1837; (non Heyne, 1820); Graham, 34; Birdwood, 9.

This is a beautiful scapigerous species attached to precipitous rocks below the waterfalls.

FLOWERS: July-October; FRUITS: August-December.

LOCAL NAME: Lahan Tirda.

2. *Impatiens dalzellii* Hook. f. & Thomson, in J. Linn. Soc. Lond. 4: 123, 1860; Dalz. &

Gibs. 43; Birdwood, 9; Nairne, 44; Birdwood, 404; Woodrow, 11: 266; Cooke, 649 & 1: 173 (183); Blatter 36: 312; Santapau, 289 & 440; Puri & Mahajan, 120.

This is a common monsoon herb with yellow flowers. It grows in forest undergrowth in loose soil and disappears soon after monsoon.

FLOWERS & FRUITS: August-October.

LOCAL NAME: Pivla Tirda.

3. *Impatiens pulcherrima* Dalz. in Hook. J. Bot. 2: 37, 1850; Hook. Bot. Mag. t. 4615, 1837; Dalz. & Gibs. 44; FBI 1: 458; Nairne, 44; Cooke, 650 & 1: 175 (185); Woodrow, 11: 266.

This is a tall and showy balsam; fairly common and gregarious along the Fitzgerald Ghat.

FLOWERS & FRUITS: August-January.

LOCAL NAME: Motha Tirda.

4. *Impatiens balsamina* Linn. Sp. Pl. 938; 1753; Graham, 34 (p.p.); Dalz. & Gibs. 44 (p.p.); Nairne, 44; Santapau, 400; Puri & Mahajan, 120.

I. balsamina var. *vulgaris* Hook. f. in FBI 1: 454, 1874.

This is a rare species collected from roadsides on way to Panchgani.

FLOWERS & FRUITS: July-September.

LOCAL NAME: Tirda.

5. *Impatiens balsamina* var. *rosea* (Lindl.) Hook. f. in Fl. Brit. Ind. 1: 454, 1874; Birdwood, 9; Blatter, 36: 314.

I. rosea Lindl. Bot. Reg. t. 27, 1841.

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I. balsamina var. *brevicalcarata* Cooke, Fl. Pres. Bombay, 1: 174, 1901.

This is a common and gregarious species of balsam, all over Mahabaleshwar. It appears sometimes in July and lasts until November. Its rosy mauve flowers which are produced in profusion make it a conspicuous species in the latter part of the monsoon.

FLOWERS & FRUITS: July-November.

LOCAL NAME: Ran Tirda.

6. *Impatiens kleinii* Wight & Arn. Prodr. 140, 1834; Dalz. & Gibs. 43; Nairne, 44; Wight, Icon. t. 884; Cooke, 1: 171 (181); Birdwood, 120; Blatter 36: 311; Santapau, 290.

A rare plant along Fitzgerald Ghat.

FLOWERS & FRUITS: August-September.

LOCAL NAME: Tirda.

7. *Impatiens oppositifolia* Linn. Sp. Pl. 937, 1753; Graham, 34; Wight, Icon. t. 883; Dalz. & Gibs. 43; Nairne, 44; FBI. 1: 448, Birdwood, 9 & 404; Woodrow, 11: 266; Cooke, 1: 172 (182); Blatter, 36: 312.

I. rupicola Hook. f. in Kew Bull. 1910: 292, 1910; Blatter, 36: 310.

This is common and gregarious species, in forest clearings and under trees, as well as in open rocky situations. The dark pink-purple flowers are very conspicuous during rainy season.

FLOWERS & FRUITS: August-September.

LOCAL NAME: Tirda.

8. *Impatiens pusilla* Heyne ex Hook. f. & Thomson, in J. Linn. Soc. 4: 122, 1860; Blatter, 36: 312.

I. inconspicua auct. (non Benth. ex Wight & Arn. Prodr. 139, 1834); Graham, 34; Birdwood, 9; Cooke, 649, & 1: 171 (182); Santapau, 289.

I. inconspicua var. *pusilla* Hook. f. in F.B.I. 1: 448, 18.

A common herb among the grasses in wet

places, very variable species.

FLOWERING & FRUITING: August-October.

LOCAL NAME: Tirda.

9. *Impatiens tomentosa* Heyne ex Dalz. & Gibs., Bombay Flora, 43, 1861; Wight, Icon., t. 749; Nairne. 45.

This species is included on the authority of Nairne.

10. *Impatiens lawii* Hook. f. & Thomson in J. Linn. Soc. 4: 122, 1860; FBI 1: 448; Nairne, 45; Cooke, 1: 172 (183); Blatter 36: 312.

There is one specimen of this species from Mahabaleshwar in B.S.I. (Poona) Herbarium, collected by R. K. Bhide.

FLOWERS & FRUITS: August-November.

TROPAEOLACEAE

Tropaeolum Linn.

1. *Tropaeolum majus* Linn. Sp. Pl. 343, 1753.

A cultivated plant occasionally found in private gardens.

CONNARACEAE

Connarus Linn.

1. *Connarus monocarpus* Linn. Sp. Pl. 678, 1753; Graham, 35; Dalz. & Gibs. 53; FBI. 2: 50, Birdwood, 11, 1897.

This species is included here on authority of Birdwood only.

Rourea Aublet (nom. cons.)

1. *Rourea minor* (Gaertn.) Alston, in Trimen, Handb. Fl. Ceylon 6:67, 1931; Leenh, in Van Steenis, Fl. Malesiana, Ser. 1, 5:514, 1958.

Aegiceras minus Gaertner, Fruct. 1:216, t. 46, 1788.

R. santaloides (Vahl) Wight & Arn., Prodr. 144, 1844; *Connarus santaloides* Vahl, Symb. 4: 84, 1794.

This species is reported here on authority of Birdwood.

RUTACEAE

- 1. Trees *Evodia* 2
- 1. Shrubs 2
- 2. Unarmed shrubs 3
- 3. Leaves with 5 or less leaflets.....
..... *Glycosmis*
- 3. Leaves with more than 5 leaflets.....
..... *Murraya*
- 2. Armed shrubs 4
- 4. Leaves trifoliate *Toddalia*
- 4. Leaves unifoliate 5
- 5. Erect shrubs *Atalantia*
- 5. Scandently climbing shrubs
..... *Paramignya*

Atalantia Corr.

1. *Atalantia racemosa* Wight & Arnott, Prodr. 91, 1834; FBI 1: 512; Cooke, 1: 187 (199); Talbot, 1:201, 125; Blatter, 36:310; Santapau, 40.

A. monophylla Graham, Cat. Bombay, Pl. 23, 1939; (non Corr. nec. DC. 1824); Dalz. & Gibs. 28; Lisboa, 210; Nairne, 48; Cooke, 1: 187 (199); Blatter, 36: 310; Puri & Mahajan, 121.

This is a common species at Mahabaleshwar. Lodwick Point, Tiger path, Fitzgerald Ghat, Koyna Valley.

FLOWERS: October-December;

FRUITS: March-August.

LOCAL NAMES: Makad Limbu, Ran Limbu.

Evodia Forst.

1. *Evodia lunu-ankenda* (Gaertn.) Merrill, in Phil. Journ. Sci. 7: 378, 1912, Santapau, 307. *Fagara lunu-ankenda* Gaertn. Fruct. 1: 334, t. 68, f. 9, 1788. *Zanthoxylum triphyllum* Graham, Cat. 36, 1839; Dalz. & Gibs. 45. *E. roxburghiana* Benth. Fl. Hongkong, 59, 1861; FBI 1: 487; Lisboa, 210; Cooke, 1: 177 (188); Talbot, 1: 185, t. 113; Blatter, 36: 315; Puri & Mahajan, 122.

Usually a tree up to 10 metre tall, but on way to Wada there are a few trees which reach 15 metres height. Though it is not found in

abundance anywhere, it is a well distributed species.

Table lands, Rotunda Ghat, Lodwick point, Lingmala, Chinaman's falls, Fitzgerald Ghat.

FLOWERS: April-June;

FRUITS: August-December.

LOCAL NAME: Tikatna.

Glycosmis Corr.

1. *Glycosmis arborea* (Roxb.) DC. Prodr. 1: 538, 1824.

Limonia pentaphylla Retz., Obs. Bot. 5: 24, 1788; [non *Glycosmis pentaphylla* (Roxb.) DC.] *L. arborea* Roxb. Pl. Cor. t. 85, 1798. *G. pentaphylla* auct. [non (Roxb.) DC. 1824]; Graham, Cat. Bombay pl. 23; Dalz. & Gibs. 29; Nairne, 47; FBI 1: 499; Cooke, 1: 181 (192); Talbot, 1: 191, t. 117; Blatter, 36: 317; Puri & Mahajan, 121.

A rare species at Mahabaleshwar, which is only known from Dr. T. Cooke's Collection.

FLOWERS & FRUITS: October-June.

LOCAL NAME: Kirmira.

Murraya Linn. (nom. cons.)

- 1. Leaflets 3-7; flowers few, \pm 3 cm long.....
..... *M. paniculata*
- 1. Leaflets 11-25; flowers numerous, \pm 1 cm. long
..... *M. koenigii*

1. *Murraya koenigii* (Linn.) Spreng, Syst. 2: 315, 1826; FBI 1: 503; Lisboa, 210; Nairne, 47; Cooke, 1: 182 (193); Talbot, 1: 193; Blatter, 36: 318; Puri & Mahajan, 121.

Bergera koenigii Linn. Mant. 1: 565, 1767; Graham, 24: Dalz. & Gibs. 29.

A small tree very common along Fitzgerald Ghat. Occasionally found on the plateau.

FLOWERS: March-April;

FRUITS: March-June.

LOCAL NAME: Kari patta, Kari nim.

LOCAL USES: Leaves used for flavouring curries and chutnies.

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2. *Murraya paniculata* (Linn.) Jack. in Misc. 1: no. 5, 31, 1820; Graham, 24; Dalz. & Gibs. 29: Blatter, 36: 317.

Chalcas paniculata Linn. Mant. 1: 68, 1767.
Murraea exotica Linn. Mant. 2: 563, 1771; Graham, 24; Wight, Icon. t. 96; Nairne, 47; Cooke, 1: 182 (193); Puri & Mahajan, 120.
M. exotica var. *paniculata* (Jack.) Birdwood, in J. Bombay nat. Hist. Soc. 10: 404, 1897.

There is only one specimen of this species, collected from south of Mahabaleshwar.

Paramignya Wight

1. *Paramignya monophylla* Wight, Ill. 1: 109, t. 42, 1840.

A shrubby straggling climber seen only once on the slopes of Lodwick point, from Dhobi falls.

Toddalia Juss.

1. *Toddalia asiatica* (Linn.) Lamk. Ill. 2: 116, 1797, Blatter, 36: 316; Santapau, 38.

Paullinia asiatica Linn. Sp. Pl. 365, 1753.
T. aculeata Pers. Syn. 1: 249, 1805; Graham, 37; Dalz. & Gibs. 46; FBI 1: 479; Birdwood, 404; Cooke 1: 179 (190); Talbot 1: 189, t. 115.

Limonia oligandra Dalz. in Kew J. Bot. 2: 258, 1850; Dalz. & Gibson, 28.

A rare shrub found only between Dhobi falls and Lodwick point. Leaves prominently gland-dotted.

FLOWERS: August-January.

ICACINACEAE

Nothapodytes Blume

1. *Nothapodytes foetida* (Wight) Sleumer, Notizbl. Bot. Gart. Berlin Dahlem, 15: 247, 1940; Howard in J. Arnold Arbor. 23: 70, 1942.

Stemonurus foetidus Wight, Icon. t. 955, 1845.

Mappia foetida (Wight) Miers. Contrib. 1: 64, 1851; Ann. Mag. Nat. Hist. ser. 2: 9, 395, 1853; FBI 1: 589; Birdwood, 405; Cooke, 1: 225 (239); Talbot 1: 267, t. 158; Santapau, 47.

M. oblonga Miers, Contrib. 1: 65, 1851; Dalz. & Gibs. 28: FBI. 1: 589; Birdwood, 405.

Common tree at Mahabaleshwar. The powerful foetid smell of flowers attracts the attention of insects as well as human beings.

FLOWERS: August-December;

FRUITS: December-January.

LOCAL NAME: Ghanera.

Chinaman's falls, Dhobi falls, Lodwick point, Madhu Kosh, Bhilar.

HIPPOCRATEACEAE

1. Style overtopping the stamens.....*Loeseneriella*
 1. Style shorter than the stamens.....*Reissantia*

Loeseneriella A. C. Smith

1. *Loeseneriella obtusifolia* (Roxb.) A. C. Smith, in Amer. J. Bot. 28: 440, 1941 & J. Arn. Arbor. 26: 169, 1945.

Hippocratea obtusifolia Roxb. Fl. Indian 1: 170, 1820; Graham, 27; Woodrow, 11: 270; Talbot 1: 282, t. 282, t. 167, Cooke, T. 1: 234 (249).

Less common than *Reissantia indica*, found near Fitzgerald Ghat.

FLOWERS & FRUITS: November.

LOCAL NAME: Dahshir.

Reissantia Halle

1. Inflorescence terminal..... *R. grahamii*
 1. Inflorescence axillary.....*R. indica*

1. *Reissantia grahamii* (Wight) Ding Hon, in Blumea, 12: 33, 1963.

Hippocratea grahamii Wight, Ill. 134, 1838 & Icon. t. 380, 1840; FBI 1: 624; Dalz. & Gibs. 32; Cooke 1: 235 (249); Talb. 1: 283, t. 168.

An extensive climber over 10 metre long near Lodwick point. Only two plants were seen in this area.

FLOWERS & FRUITS: March-May.
Lodwick point, Fitzgerald Ghat.

2. **Reissantia indica** (Willd.) Halle, Mem. Inst. Franc. Afrique Noire n. 64 : 85, 1962.

Hippocratea indica Willd. Sp. Pl. 1: 93, 1797; Graham, 27; Dalz. & Gibs. 32: FBI 1: 624; Nairne, 58; Cooke, 1: 235 (250); Talbot, 1: 285, t. 169.

Found at Fitzgerald ghat in abundance but it is scarcely seen on the plateau.

FLOWERS: April; FRUITS: June-August.
LOCAL NAME: Kazurati.

MELIACEAE

- 1. Leaves simple..... *Turraea*
- 1. Leaves pinnately compound..... 2
- 2. Seed not winged..... *Melia*
- 2. Seed winged *Toona*

Melia Linn.

1. **Melia azedarach** Linn. Sp. Pl. 384, 1753; Graham, 30; FBI 1: 544; Nairne 53; Cooke 1: 205 (218).

This is a beautiful tree due to its light blue flowers which are produced in large panicles. It is cultivated near Bhilar estate.

FLOWERS & FRUITS: April-May.
LOCAL NAME: Bakain nim.

Toona Roem.

1. **Toona ciliata** Roem. Syn. Hesp. 139, 1846; Santapau, 45.

Cedrela toona Roxb. ex Rotll. & Willd. in Ges. Naturl. Fr. Neue Schr. 2: 198, 1803; Graham, 246; Dalz. & Gibs. 38; Nairne, 54; Birdwood, 405; Cooke 1: 217 (230); Talbot, 1: 249, tt. 148-9.

Planted at Bhilar in a private estate.

FLOWERS: January-April;
FRUITS: March-May.
LOCAL NAME: Tooni, Thorla nim.

Turraea Linn.

1. **Turraea villosa** Benn. in Benn. Br. Pl. Jav. Rar. 182, 1840; FBI 1: 542; Cooke, 1: 204 (216); Talbot 1: 224, t. 124; Santapau, 42.

T. virens Graham Cat. Bombay Pl. 1839 (non Linn., 1771); Dalz. & Gibs. 36; Nairne, 53.

A shrub reported by several collectors but it is not seen on the plateau except at lower altitudes in Koyna valley.

FLOWERS: May-June.

FRUITS: June-December.

LOCAL NAME: Kapur Bhendi, Panduri.

OPILIACEAE

Cansjera Juss.

1. **Cansjera rheedii** Gmel. Syst. 2: 280, 1791; FBI 1: 582; Cooke, 1: 223 (237); Talbot, 1: 262, t. 155; Santapau, 47.

Climbing scandent shrub found on lower ghat slopes and in valleys.

FLOWERS: October-December.

FRUITS: November-March.

LOCAL NAME: Taroli.

CELASTRACEAE

- 1. Armed shrubs or small trees..... *Maytenus*
- 1. Unarmed shrubby climbers..... *Celastrus*

Celastrus Linn.

1. **Celastrus paniculata** Willd. Sp. Pl. 1: 1125, 1798; Graham, 38; Dalz. & Gibs. 47; FBI 1: 617; Nairne, 57; Birdwood, 405; Cooke, 1: 231 (245); Talbot, 1: 276, t. 163; Santapau, 48.

A straggling climber frequently found on the Kelghar Ghat, on Satara Road.

FLOWERS: December-March.

FRUITS: March-September.

LOCAL NAME: Kangni.

Maytenus Molina

1. *Maytenus wightiana* Babu, Bull. Bot. Surv. India, 10: 349, 1969.

Gymnosporia rothiana (Wight. & Arn.) Laws, in FBI 1: 619, 1875; Nairne, 57; Birdwood, 405; Cooke, 1: 232 (246); Talbot, 1: 278, t. 164.

Celastrus rothiana Wight & Arn. Prodr. 159, 1834. (non Schultes, 1820); Dalz. & Gibs. 47 & 318.

Celastrus emarginata Graham, Cat. Bombay pl. 39, 1839.

Maytenus rothiana (Walp.) Ramam. in fl. Hassan Dist. 320, 1976.

Common small tree in the forest areas. Attractive when in beautiful red coloured fruits. Generally emarginate, acute or obtuse leaves are seen on one and the same twig.

Ramamoorthy (I.c.) makes a new combination based on Walper's name stating an example under article 72 of I.C.B.N. But he has misinterpreted article 72 and the example used under that article. The article and example cited under the article are applicable only to the names which have been intentionally published as nomen novum only. Walper did not publish a new name but he clearly made a new combination in the new genus. Combinations based on illegitimate names have to be rejected.

Chinaman's falls, Yenna Lake, Babington pt., Lingmala, Lodwick pt.

FLOWERS & FRUITS: March-November.

LOCAL NAME: Aukli.

RHAMNACEAE

- 1. Unarmed shrubs 2
- 2. Erect shrubs *Rhamnus*
- 2. Climbing shrubs *Ventilago*

- 1. Armed shrubs 3
- 3. Leaves hairy, 3-nerved *Zizyphus*
- 3. Leaves glabrous, smooth; with single main nerve *Scutia*

Rhamnus Linn.

1. *Rhamnus wightii* Wight & Arn. Prodr. 164, 1834; Dalz. & Gibs. 50: FBI 1: 639; Nairne, 61; Cooke, 1: 244(259); Talbot, 1: 300.

A rare glabrous shrub 2-3 m tall, seen only at Kate's point on very precipitous rocks.

FLOWERS & FRUITS: January-April.

Scutia Commers

1. *Scutia myrtina* (Burm. f.) Kurz., J. Asiat. Soc. Bengal, 44: 168, 1875; Santapau, 52.

Rhamnus myrtinus Burm. f., Fl. Ind. 60, 1768.

Scutia indica Brongn. in Ann. Soc. Nat. Ser. 1, 10; 363, 1827; Graham, 39; Dalz. & Gibs. 50: FBI 1: 640; Lisboa 211; Nairne, 60; Birdwood, 406; Cooke, 1: 244 (260); Talbot, 1: 302, t. 179.

Rhamnus circumscissus Linn. f. Suppl. 152, 1781.

Very common straggling armed shrub with shining leaves and curved spines, on forest fringes. It is popularly called 'wait a bit' plant on account of its spines which catch clothes of hurrying visitors who walk close to this species.

Madhu Kosh, Rippon Hotel, Chinaman's falls, Lodwick point, Yenna lake.

FLOWERS & FRUITS: March-December.

LOCAL NAME: Chimat.

Ventilago Gaertn.

1. *Ventilago bombaiensis* Dalz. in Hook. Kew J. Bot. 3: 36, 1851; Dalz. & Gibs. 48: FBI 1: 631; Nairne 59; Birdwood, 406; Cooke, 1: 239 (254); Talbot, 1: 293; Santapau, 49.

Straggling unarmed climber scandent over forest trees. Flowers green. Rare on the plateau, Fitzgerald Ghat.

FLOWERS: December-February.

LOCAL NAME: Toran.

Zizyphus Juss.

1. *Zizyphus rugosa* Encycl. 3: 319, 1789; Graham, 30; Dalz. & Gibs. 49; FBI 1: 636; Lisboa, 211; Nairne 60; Birdwood, 406; Cooke, 1: 243 (258); Talbot, 1: 298, t. 177, Sedgwick, in J. Bombay nat. Hist. Soc. 45: 74, 1919; Santapau, 51.

A prickly rambling shrub, with very long terminal inflorescence. Common all over especially in the open forests.

Falkland point, Lodwick point, Chinaman's point, Fitzgerald Ghat.

FLOWERS: December-March.

FRUITS: March-April.

LOCAL NAME: Toren.

AMPELIDACEAE

Cissus Linn.

- 1. Leaves simple 2
- 2. Erect shrubs, tendrils nil.....*C. woodrowii*
- 2. Scandent shrubs, tendrils leaf opposed.....3
- 3. Leaves glabrous variegated... *C. discolor*
- 3. Leaves tomentose.....*C. repanda*
- 1. Leaves 5-foliolate*C. elongata*

1. *Cissus woodrowii* (Stapf) Santapau, Kew Bull. 1948: 276, 1948; Santapau, 53.

Vitis woodrowii Stapf ex Cooke Fl. Bombay Pres. 1: 248, 1902.

C. vitiginea Dalz. & Gibs. Bomb. Fl. 40, 1861 (non Roxb.)

A shrub 1.5-2 metres tall. Very common on exposed hill slopes along Kelghar ghat on Satara Road.

FLOWERS & FRUITS: June.

LOCAL NAME: Girnul.

2. *Cissus discolor* Blume, Bijdr. 181, 1825; Dalz. & Gibs. 40; Santapau, 52.

Vitis discolor Dalz. in Hook. Kew J. Bot. 2: 39, 1850; FBI 1: 647; Nairne, 63; Birdwood, 906; Cooke, 1: 250 (266); Talbot, 1: 309.

A scandent climber with leaves which are green on the dorsal surface and metallic red on the ventral surface. Frequent along the Fitzgerald Ghat.

FLOWERS: August-October.

LOCAL NAME: Telicha Vel.

3. *Cissus repanda* Vahl Symb. 3: 18, 1794; Graham, 32; Dalz. & Gibs. 39; Santapau, 53.

Vitis repanda Wight & Arn. Prod. 125, 1824; FBI 1: 271; Nairne, 62; Cooke, 1: 215 (267); Talbot, 1: 312, tt. 184-5.

Young foliage of this species is brightly coloured. This species is collected from Fitzgerald Ghat only.

FLOWERS & FRUITS: April-June.

LOCAL NAME: Gendal.

4. *Cissus elongata* Roxb. Fl. Ind. 1: 411, 1820; Santapau, 53.

Vitis elongata Wall. ex Wight & Arn. Prodr. 128, 1824; FBI 1: 658; Cooke, 1: 265 (273); Talbot, 1: 320, t. 190.

A glabrous climber very common all over Mahabaleshwar among shrubs and bushes. This is the commonest species of this area. Size and margins of the leaves are very variable.

FLOWERS: May-June; FRUITS: August-October.

Pratapsingh Park, Tiger's Path, Kate's point, Wilson point, Fitzgerald Ghat.

Vitis Linn.

1. *Vitis vinifera* Linn. Sp. Pl. 202, 1753; FBI 1: 652.

A woody climber with bifid tendrils. Cultivated for its edible fruits in Dr. Hakim's estate at Bhilar.

FLOWERS: December: FRUITS: March.

LEEACEAE

Leea Linn.

1. *Leea indica* (Burm. f.) Merrill, in Phil. J. Sci. Bot. 14: 245, 1919; Santapau, 55.

Staphylea indica Burm. f. Fl. Ind. 75, t. 24, f. 2, 1768.

Aquilegia sambucina Linn. Mant. 2 : 211, 1771.

Leea staphylea Roxb. Fl. Ind. 1: 658, 1832; Graham, 33; Dalz. & Gibs. 41.

L. sambucina Willd. Sp. Pl. 1: 1177; FBI 1: 666 (p.p.); Nairne, 64; Cooke, 1: 260 (277); Talbot, 1: 327, t. 194.

A frequent shrub on Fitzgerald Ghat.

FLOWERS: March-June; FRUITS: May-December.

LOCAL NAME: Dinda.

SAPINDACEAE

1. Climbers or scandent shrubs..... *Allophyllus*
 1. Trees 2
 2. Fruit when ripe \pm 1 cm. long.....
 *Dimocarpus*
 2. Fruit when ripe \pm 3-4 cm. long..... *Litchi*

Allophyllus Linn.

1. *Allophyllus serratus* (Roxb.) Radlk. in Pfreich. 98: 562, 1921; Santapau, 56.

Ornitrophe serrata Roxb. Pl. Corom. 1: 44, t. 61, 1795.

Schmidelia cobbe Graham, Cat. Bombay pl. 29, 1839.

Cardiospermum schmidelia Dalz. & Gibs. Bombay Fl. 34, 1861.

A. cobbe Hiern., in Fl. Br. Ind. 1: 7, 674, 1875 (p.p.); Lisboa, 211; Nairne, 65; Birdwood, 406; Cooke, 1: 265 (282); Talbot, 1: 334, t. 197.

A villous, trifoliate, scandent shrub, often climbing on medium size trees. Common all over Mahabaleshwar. Flowers white, profusely produced in pendulous spikes during late summer and last till early monsoon.

Petit Road, Lodwick point, Kelgar Ghat, Tiger's path.

DIMOCARPUS Loureiro

1. *Dimocarpus longan* Lour., Fl. Cochinch. 233, 1790; Leenhouts, Blumea, 19: 122, 1971, *Nephelium longana* (Lamk.) Camb. in Mem. Mus. Par. 18: 30, 1829; Graham, 29; Dalz. & Gibs. 35; FBI 1: 688; Birdwood, 406; Nairne, 66; Cooke, 1: 267 (285); Talbot, 1: 338, t. 200.

A handsome tree, 10-15 m tall with pinnate leaves. Common on Fitzgerald Ghat.

FLOWERS & FRUITS: April-May.

LOCAL NAME: Wumb.

Litchi Sonner.

1. *Litchi chinensis* Sonner. Voy. Ind. 3: 255, 1782; Benthall, in Trees of Calcutta, 124. *Nephelium litchi* Camb. in Mem. Mus. Par. 18: 30, 1829; Nairne, 66. *Dimocarpus litchi* Lour. Fl. Cochinch. 233, 1790.

A small tree with paripinnate leaves and 4-12 leaflets in each leaf. Fruits red or pink when ripe. Cultivated for its edible delicious fruits, at Bhilar and on sides of Yenna river.

FLOWERS & FRUITS: May.

Turpinia Vent.

1. *Turpinia pomifera* DC. Prodr. 2: 3, 1825, Birdwood, 11, 1897.

This species is reported here on authority of Birdwood.

ANACARDIACEAE

Mangifera Linn.

1. *Mangifera indica* Linn. Sp. Pl. 200, 1753; Lisboa, 211; Birdwood, 406; Nairne, 67; Cooke, 1: 273 (291); Talbot, 1: 348; Santapau 58.

Occasionally found on the plateau, where it does not bear fruits. Trees in the valleys are taller but bear inferior quality fruits.

FLOWERS: February-March; FRUITS: May-June.

LOCAL NAME: Amba.

Distribution: Chinaman's falls, Lodwick point, Fitzgerald Ghat.

MORINGACEAE

Moringa Lamk.

1. *Moringa oleifera* Lamk., Encycl. Meth. Bot. 1: 398, 1785.

M. pterigosperma Gaertner, Fruct. 2: 314, 1791; Nairne, 70; FBI 2: 45; Cooke, 1: 282 (301).

A cultivated medium-size tree. Pods and leaves used for vegetables and curries.

FLOWERS: January-April.

LOCAL NAME: Shevga.

FABACEAE

- 1. Pods jointed 2
- 2. Stamens 5 + 5 in two rows.....*Smithia*
- 2. Stamens 10, united or 9 + 1.....3
- 3. Leaves pinnate *Zornia*
- 3. Leaves simple or imparipinnate.....4
- 4. Pods turgid*Alysicarpus*
- 4. Pods flat *Desmodium*
- 1. Pods not jointed 5
- 5. Anthers spiculate *Indigofera*
- 5. Anthers obtuse 6
- 6. Leaflets toothed *Cicer*
- 6. Leaflets entire 7
- 7. Style bearded below the stigma.....8
- 8. Main rachis or entire leaflets modified into tendrils*Pisum*
- 8. Main rachis not modified into tendril 9
- 9. Leaves trifoliolate 10
- 10. Stigma oblique 11
- 11. Keel spiral *Phaseolus*
- 11. Keel not spiral *Vigna*
- 10. Stigma not oblique *Spenostylis*
- 9. Leaves imparipinnate consisting more than 3 leaflets..... *Tephrosia*

- 7. Style not bearded below the stigma 12
- 12. Leaves simple or imparipinnate 13
- 13. Anthers not uniform.....14
- 14. Flowers yellow *Crotalaria*
- 14. Flowers blue or purple*Mucuna*
- 13. Anthers uniform15
- 15. Leaflets always alternate *Dalbergia*
- 15. Leaflets opposite16
- 16. Pods one seeded.... 17
- 17. Climbers *Paracalyx*
- 17. Trees *Pongamia*
- 16. Pods many seeded 18
- 18. Leaves gland-dotted 19
- 19. Pods turgid..... *Flemingia*
- 19. Pods compeassed.... *Atylosia*
- 18. Leaves not gland-dotted20
- 20. Leaves simple *Nogra*
- 20. Leaves trifoliolate21
- 21. Flowers yellow *Dumasia*
- 21. Flowers red or purple 22
- 22. Climbers *Canavalia*
- 22. Trees *Erythrina*
- 12. Leaves multifoliolate *Derris*

Smithia Ait.

- 1. Calyx rigid with parallel veins.....2
- 2. Flowers purple *S. purpurea*
- 2. Flowers yellow 3
- 3. Stems with dense spreading bristles.... *S. setulosa*
- 3. Stems glabrescent 4
- 4. Leaves 6-20 mm long, flowers conjested at the nodes..... *S. conferta*
- 4. Leaves 25-35 mm long, flowers in lax racemes *S. sensitiva*
- 1. Calyx membranaceous; veins anastomosing5

5. Flowers in globose terminal heads.....
 *S. pycnantha*
 5. Flowers in racemes6
 6. Bracteoles equal in length.....7
 7. Leaflets 2 pairs*S. bigemina*
 7. Leaflets 3-4 pairs*S. blanda*
 6. Bracteoles unequal in length.....
 *S. agharkari*

1. **Smithia purpurea** Hook. Bot. Mag. t. 4283, 1847; Dalz. & Gibs. 64; Birdwood, 407; F.B.I. 2: 149; Nairne 83; Cooke, 1: 337 (359); Santapau, 68.

This is the only purple flowered *Smithia* found at Mahabaleshwar or rather in Western India. Frequently seen on rocky slopes along the Yenna lake.

FLOWERS & FRUITS: September-December.

LOCAL NAME: Berki.

2. **Smithia setulosa** Dalz. in Kew J. Bot. 3: 208, 1851; FBI 2: 149; Dalz. & Gibs. 63; Birdwood, 407; Nairne 82; Cooke, 1: 337 (359); Santapau, 68.

An erect herb, common in open places. This species is easily identified by large flowers and prominent bristly hairs on the stem.

FLOWERS: September-October;

FRUITS: October-November.

3. **Smithia conferta** Sm. in Rees, Cycl. 33, no. 2, 1819; Cooke, 1: 336 (358); Santapau, 67.

S. geminiflora Roth, Nov. Pl. sp. 352, 1821.

S. geminiflora var. *conferta* Baker, in FBI 2: 149, 1876.

Common in marshy ground. Flowers yellow to saffron coloured.

Wilson point; Lingmala; Near Rippon Hotel.

FLOWERS: September-December;

FRUITS: October-February.

4. **Smithia sensitiva** Ait. Hort. Kew 3: 496, 1789; Graham, 48; Dalz. & Gibs. 63; FBI 2: 148; Nairne, 82 (p.p.); Cooke, 1: 335 (357); Santapau 67.

Rare species at Mahabaleshwar, though the commonest *Smithia* down in Konkan. Only one specimen is collected from Chinaman's falls area.

FLOWERS & FRUITS: August-October.

5. **Smithia pycnantha** Benth. ex Baker, in Fl. Brit. Ind. 2: 150, 1876; Nairne, 82; Cooke 1: 338 (360); Santapau, 68.

This species closely resembles *S. bigemina*, but differs from it in having globose terminal heads of flowers.

FLOWERS & FRUITS: September-October.

6. **Smithia bigemina** Dalz., in Kew J. Bot. 3: 208, 1851; Dalz. & Gibs. 64; FBI 2: 149; Nairne 83; Cooke, 1: 338 (360); Santapau, 68.

Gregarious species forming large carpets of yellow flowers, on open rocky grounds and in rice-fields. The standard petal is streaked with two prominent red lines.

Dhobi falls, Kate's point, Lodwick point.

FLOWERS: June-October;

FRUITS: September-January.

7. **Smithia blanda** var. *racemosa* Baker, in Fl. Brit. Ind. 2: 151, 1876; Birdwood, 407; Cooke, 1: 338 (361); Santapau, 69.

S. racemosa Heyne ex Dalz. & Gibs. Bombay Fl. 63, 1861.

S. hirsuta Dalz. in Hook. J. Bot. 3: 135, 1851; Dalz. & Gibs. 63.

S. humilis Benth. ex Cooke, Fl. Pres. Bombay, 1: 339, 1901.

Quite frequent in rocky soils and on earthen embankments along the road sides. Collected from Kate's point.

FLOWERS: September; FRUITS: October.

LOCAL NAME: Mothi Berki.

8. **Smithia agharkari** Hemadri, in Indian Forester 97: 67, 1971.

An erect annual herb 9-20 cm. tall. Stems dichotomously branched. Leaves paripinnately

compound. Inflorescence of terminal and axillary simple racemes. Bracteoles greenish, in unequal pairs. Fruits 3-4 mm. in diameter.

A rare herb among the grasses on open plateaus.

Wilson Point.

FLOWERS & FRUITS: September-October.

Zornia Gmel.

1. *Zornia gibbosa* Span. in *Linnaea* 15: 192, 1841; Santapau, 57.

Z. diphylla auct. plur. (non Pers, 1807); Baker, in *FBI* 2: 147, 1876; Nairne, 81; Cooke, 1: 334; Santapau, 66.

Z. angustifolia Graham, *Cat. Bombay pl.* 48, 1839 (non Smith).

A rare species in waste grasslands and fallow land.

FLOWERS: August-October.

FRUITS: October.

Specimen Collected: Laxman (Api. Res. Centre) — s.n.

Alysicarpus Neck

- 1. Leaves orbicular *A. beddomei*
- 1. Leaves elliptic, oblong or ovate.....2
- 2. Calyx 3-4 mm long, pods 4-6 jointed.....
- *A. parviflorus*
- 2. Calyx 7-12 mm long; pods 2-4 jointed.....3
- 3. Inflorescence 4-7 cm long....*A. racemosus*
- 3. Inflorescence 13-27 cm long.....
- *A. belgaumensis*

1. *Alysicarpus beddomei* Schindler, in *Fedde Repert. Beih.* 49: 244, 1928.

A. rotundifolius Prain, in *J. Asiat. Soc. Bombay*, 66: 385, 1897.

Desmodium rotundifolium Baker, in *FBI* 2: 172, 1876; Cooke, 1: 357 (381); Santapau, 73.

Very common on grassy hill slopes all over. Fitzgerald Ghat, Lingmala, Bhilar.

FLOWERS & FRUITS: October-November.

2. *Alysicarpus parviflorus* Dalz. in *Hook. Kew J.* 3: 211, 1851.

Desmodium parviflorum (Dalz.) Baker, in *FBI* 2: 172, 1876; Cooke, 1: 358 (381); Santapau, 74, (non Mart. Galeott. 1843).

D. alysicarpoides K. v. Meeuwen, in *Reinwardtia*, 6: 246: 1962.

The species approaches *Desmodium* and Dr. T. Cooke is of the opinion that this is a link species between *Alysicarpus* and *Desmodium*. We have not seen specimen of this species from Mahabaleshwar. Lee, in *Bombay Gazetteer*, vol. 19 reports it from Mahabaleshwar.

3. *Alysicarpus racemosus* Benth., in *Linnaea* 24: 642, 1851.

A. belgaumensis var. *racemosus* Baker, in *FBI* 2: 160, 1876; Cooke, 1: 330 (373).

Found mixed with *A. belgaumensis* but much less frequent on grassy slopes. Flower colours vary from white to blue.

Yenna lake, Lodwick point, Lingmala, Bhilar.

FLOWERS & FRUITS: October.

4. *Alysicarpus belgaumensis* Wight, *Icon. t.* 92, 1838; Dalz. & Gibs. 65; *FBI* 2: 160; Cooke 1: 349 (372); Santapau, 70.

Abundant in open places during monsoon and post-monsoon periods, all over Mahabaleshwar. Flowers blue, or sometimes white.

FLOWERS & FRUITS: September-November.

LOCAL NAME: Dhampta.

Desmodium Desv.

- 1. Leaves unifoliolate, petiole winged *D. triquetrum*
- 1. Leaves usually trifoliolate..... 2
- 2. Erect herbs *D. laxiflorum*
- 2. Trailing herbs *D. triflorum*

1. *Desmodium laxiflorum* DC. in *Ann. Sci. nat. (Paris) ser. 1*, 4: 100, 1825; *Prodr.* 2: 335, 1825; *FBI* 2: 164; Cooke, 1: 353 (376); Santapau, 71.

D. recurvatum Graham, ex Wight, Icon. t. 374, 1840.

Hedysarum recurvatum Roxb. Fl. Ind. 3: 358, 1832.

H. diffusum Roxb. l.c. (non Willd., 1802). Frequent on hill slopes along Fitzgerald ghats.

FLOWERS & FRUITS: August-December.

2. *Desmodium triflorum* (Linn.) DC. Prodr. 2: 334, 1825; Graham, 49; Dalz. & Gibs. 67; FBI 2: 173; Cooke, 1: 355; Santapau, 72.

Hedysarum triflorum Linn. Sp. Pl. 749, 1753.

Weed in cultivated fields and in waste-lands.

FLOWERS & FRUITS: August-December, sometimes in hot seasons.

LOCAL NAME: Ran Methi.

3. *Desmodium triquetrum* (Linn.) DC. Prodr. 2: 326, 1825; FBI 2: 163; Graham, 49; Dalz. & Gibs. 66; Nairne 84; Cooke, 1: 355 (378); Santapau, 72.

Hedysarum triquetrum Linn. Sp. Pl. 746, 1753.

At the foot of the Fitzgerald Ghat among grass.

FLOWERS & FRUITS: August-December.

Indigofera Linn.

1. Leaves simple..... *I. dalzellii*
1. Leaves compound *I. cassioides*

1. *Indigofera dalzellii* Cooke, Fl. Bombay Pres. 1: 311, 1902.

I. triquetra Dalz. in Hook. Kew J. Bot. 2: 36, 1850; (non May 1836); Dalz. & Gibs. 58; FBI 2: 93.

A prostrate herb among the grasses at Bhilar.

FLOWERS: July-September.

FRUITS: October-November.

2. *Indigofera cassioides* Rottl., ex DC. Prodr. 2: 225, 1825; Ali, in Bot. Notiser. 111; 569, 1958.

I. pulchella auct. (non Roxb., 1832); Dalzell & Gibson, Bombay Fl. 60, 1861; Lisboa, 212; Birdwood, 407; Nairne, 79; Cooke, 1: 320 (341).

I. gibsonii Graham, Cat. Bombay Pl. 46, 1839.

Common shrub along the edges of forests and on exposed slopes of hills. The stem is often covered with galls with soft velvety covering of a purple colour.

Lingmala, Bhilar, Fitzgerald Ghat, Kelgar Ghat.

FLOWERS: October-January.

FRUITS: December-April.

LOCAL NAME: Narda.

Cicer Linn.

1. *Cicer ariatinum* Sp. Pl. 738, 1753; FBI 2: 176; Cooke, 1: 408; Santapau, 88.

Cultivated and mostly used for local sale of raw green fruits. Cultivation begins with starting of hot season.

LOCAL NAME: Chana, Harbhara.

Pisum Linn.

1. *Pisum sativum* Linn. Sp. Pl. 727, 1753.

Extensively cultivated at Mahabaleshwar for its fruits which form an article of major trade to the markets of Bombay and Pune.

FLOWERS: September-December.

FRUITS: October-December.

LOCAL NAME: Matar, Vatani.

Phaseolus Linn.

- 1. Stipules medifixed2
- 2. Erect plants, 60-210 cm tall.....
- *P. khandalensis*
- 2. Prostrate or twining plants.....*P. radiatus*
- 1. Stipules basifixed *P. lunulatus*

1. *Phaseolus khandalensis* Santapau, in Kew Bull. 276, 1948; Santapau, 68.

P. grandis Dalz. in Dalz. & Gibs. Bombay Fl. 72, 1861; FBI 2: 202; Nairne, 89; Cooke, 1: 375 (400); (non Wall. 1832, nec Benth. 1844).

A rare species. The pods are eaten by local people.

FLOWERS: September-October.

FRUITS: October-November.

2. *Phaseolus radiatus* Linn. Sp. Pl. 725, 1753; Santapau, 69.

P. sublobatus Roxb. Fl. Ind. 3: 288, 1832; Cooke, 1: 373 (402).

P. trinervius Heyne ex Graham, Cat. Bombay Pl. 51, 1839; Dalz. & Gibs. 71; FBI 2: 203; Birdwood, 407; Nairne, 89.

Cultivated; the source of the pulse, Mung, of commerce.

FLOWERS: September-October.

FRUITS: October-December.

3. *Phaseolus lunulatus* Linn. Sp. Pl. 724, 1753; Graham, 51; FBI 2: 200; Cooke, 1: 377 (402).

Lima bean of commerce. Cultivated at Chinaman's falls.

FLOWERS & FRUITS: October-March.

Vigna Savi

1. *Vigna vexillata* (Linn.) A. Rich. in Sagra, Hist. Cuba, Bot. 440, 1845; FBI 2: 206; Birdwood, 407; Nairne, 89.

Phaseolus vexillatus Linn., Sp. Pl. 724, 1753.

V. capensis Walp., in Linnaea, 13: 533, 1839; Cooke, 1: 379 (404); Santapau, 80.

Common in undergrowth, especially noticeable during the middle of the monsoon season. Kate's point, Chinaman's falls, Wilson point, Dhobi's falls, Lingmala.

FLOWERS: August-October.

FRUITS: October-November.

LOCAL NAME: Halunda.

Sphenostylis E. May

1. *Sphenostylis bracteata* (Baker) Gillet, in Kew Bull. 20: 103; 1966, Santapau, 328.

Dolichos bracteatus Baker, in FBI 2: 210, 1876; Cooke, 381 (406).

D. ghaticus Sant. & Panth. in J. Bombay nat. Hist. Soc. 53: 502, 1956.

Common and prominent during monsoon along the Fitzgerald Ghat, climbing on bushes of the forest edges.

FLOWERS: August-September;

FRUITS: September-October.

Tephrosia Pers.

1. *Tephrosia tinctoria* Pers. Syn. 2: 329, 1807; FBI 2: 111; Cooke, 1: 324 (345); Santapau, 65.

T. tinctoria var. *intermedia* Baker, in FBI 2: 112, 1876; Cooke, 1: 324.

Frequent at Bhilar in grasslands and in the woods between Mahabaleshwar and Panchgani.

FLOWERS & FRUITS: October-December.

LOCAL NAME: Guli.

Crotalaria Linn.

- | | |
|--|---------------------|
| 1. Pods glabrous | 2 |
| 2. Stipules present | 3 |
| 3. Stem terete, not striate or fluted..... | |
| <i>C. mysorensis</i> | |
| 3. Stem fluted and subglabrous | |
| <i>C. retusa</i> | |
| 2. Stipules absent | 4 |
| 4. Pods distinctly exerted | 5 |
| 5. Prostrate or erect herbs..... | 6 |
| 6. Corolla exerted | <i>C. filipes</i> |
| 6. Corolla not exerted..... | <i>C. vestita</i> |
| 5. Shrubs or undershrubs..... | <i>C. albida</i> |
| 4. Pods included or scarcely exerted..... | |
| <i>C. nana</i> | |
| 1. Pods silky or hairy..... | 7 |
| 7. Erect or trailing herbs..... | <i>C. triquetra</i> |
| 7. Shrubs or undershrubs..... | <i>C. juncea</i> |

1. *Crotalaria mysorensis* Roth, Nov. Pl. Sp. 338, 1821; FBI 2; 70; Cooke, 1: 294 (314); Santapau, 61.

Frequent in exposed situations on the Fitzgerald Ghat and on way to Panchgani. Flowers yellow. The whole plant is covered with brownish shining tomentum.

FLOWERS & FRUITS: October-November.

2. *Crotalaria retusa* Linn. Sp. Pl. 715, 1753; FBI 2: 575; Birdwood, 407; Nairne 75; Cooke, 1: 299 (318); Santapau, 62.

C. leschenaultii Graham Cat. 44, 1839 (non DC. 1824); Dalz. & Gibs. 54; Lisboa, 211; Birdwood, 407.

The commonest and most showy species belonging to the genus at Mahabaleshwar. Flowers bright yellow.

Lodwick point, Madhu Kosh, Lingmala, Bhilar, Chinaman's falls.

FLOWERS: September-December.

3. *Crotalaria filipes* Benth. in Hook. London J. Bot. 2: 475, 1843; Dalz. & Gibs. 56; FBI 2: 66; Cooke, 1: 292 (312); Santapau, 60.

A spreading herb producing tiny multicoloured flowers. Usually found mixed among the grasses in open grasslands.

FLOWERS: September-December.

FRUITS: December-February.

4. *Crotalaria vestita* Baker, in Fl. Br. Ind. 2: 67, 1876; Birdwood, 407; Cooke 1: 293 (313); Santapau, 61.

Occasional among the grasses. Collected from Elephinstone point.

FLOWERS & FRUITS: October-January.

5. *Crotalaria albida* Heyne ex Roth., Nov. Pl. Sp. 333, 1821; FBI 2; 71; Cooke 1: 295 (315); Santapau, 62.

C. epunctata Dalz. in Kew J. Bot. 3: 210, 1851, Dalz. & Gibs. 56.

Frequently seen among the undergrowth of forest along Fitzgerald Ghat.

FLOWERS & FRUITS: October-February.

LOCAL NAME: Ban Methi.

6. *Crotalaria nana* Burm. f. Fl. Ind. 156, t. 48, f. 2, 1768; Dalz. & Gibs. 56; Birdwood, 407; Cooks, 1: 296 (315); Santapau, 62.

C. umbellata Wight ex Graham Cat. Bombay pl. 45, 1839; Dalz. & Gibs. 56.

Found on the grassy slopes of higher elevations. In vegetative conditions it resembles *C. mysorensis*.

Lingmala, Canaught peak, Bhilar.

FLOWERS & FRUITS: September-October.

7. *Crotalaria triquetra* Dalz. in Hook. Kew. J. Bot. 2: 34, 1850; Dalz. & Gibs. 56; Birdwood, 407; Cooke, 1: 295 (314); Santapau, 61.

Stems and branches triquetrous. Frequently seen among the grasses between Mahabaleshwar and Panchgani.

FLOWERS & FRUITS: December at times up to April.

LOCAL NAME: Ghati.

8. *Crotalaria juncea* Linn. Sp. Pl. 714, 1753; Dalz. & Gibs. 54; FBI 2: 79; Nairne 76; Cooke 1: 301 (320); Santapau, 63.

Frequently seen growing among the grasses. The shining golden silky hairs aid the identification of this species. Cultivated for fibre and for green manure.

FLOWERS: October-December;

FRUITS: January-February.

LOCAL NAME: Sunn.

Mucuna Adans.

- 1. Pods obliquely plaited, one seeded.....
..... *M. monosperma*
- 1. Pods not plaited, 4-6 seeded.....*M. pruriata*

1. *Mucuna monosperma* DC. Prodr. 2: 406, 1825; Dalz. & Gibs. 70; FBI 2: 185; Nairne 87; Cooke, 1: 364 (388).

In dense jungle of Fitzgerald Ghat, climbing over small trees. The fruits are covered pro-

fusely with golden to reddish stinging hairs. The fruit surface is reticulately plaited or with ridges.

FLOWERS: November-December.

FRUITS: December.

LOCAL NAMES: Mothi Kuvli, Iona garvi.

2. *Mucuna prurita* Hook., Bot. Misc. 2: 384, 1830; Dalz. & Gibs. 70; Santapau, 74.

M. pruriens auct. (non DC. 1825) Baker, Fl. Brit. Ind. 2: 187, 1876; Nairne 87; Cooke, 1: 365 (389).

Found only at the foot of Fitzgerald Ghat.

FLOWERS & FRUITS: August-December.

LOCAL NAME: Kavach, Kuili.

Dalbergia Linn.

1. Erect trees..... *D. latifolia*

1. Scandent or climbing shrubs.....
..... *D. sympathetica*

1. *Dalbergia latifolia* Roxb. Pl. Cor. 2: 7, t. 113, 1798; Graham, 55; Dalz. & Gibs. 77; FBI 2: 231; Birdwood, 407; Nairne, 92; Cooke, 1: 396 (422); Santapau, 85.

A rare tree at Lingmala.

FLOWERS: October-April.

FRUITS: March-May.

2. *Dalbergia sympathetica* Nimmo ex Grah., Cat. Bombay Pl. 55, 1839; Dalz. & Gibs. 78; FBI 2: 234; Birdwood, 407; Nairne 92; Cooke, 1: 398 (424); Santapau, 85.

Frequent near the foot of Fitzgerald Ghat.

FLOWERS: November-January.

FRUITS: December-March.

LOCAL NAME: Pudgul.

Paracalyx Ali

1. *Paracalyx scariosa* (Roxb.) Ali, in Univer. Stud. Karachi 5 (3): 95, 1968.

Cylista scariosa Roxb., Corom. Pl. 5 (1): 64, t. 92, 1795; Graham, 54; Dalz. & Gibs. 74; FBI 2: 219; Birdwood, 407; Nairne, 91; Cooke, 1: 386 (412); Santapau, 84.

Frequent on the hill-slopes and along the Fitzgerald Ghat.

FLOWERS: November-February.

FRUITS: January-April.

Pongamia Vent.

1. *Pongamia pinnata* (Linn.) Pierre, Fl. For. Cochinch. sub. t. 385, 1899; Merr. Inter. Rumph. Amboin. 271, 1917; Santapau, 86.

Cytisus pinnatus Linn. Sp. Pl. 741, 1753.

P. glabra Vent. Jard. Mal. 1: 28, t. 28, 1803; Graham, 53; Dalz. & Gibs. 77; FBI 2: 240; Lisboa, 212; Birdwood, 407; Cooke, 1: Nairne 92; 402 (429).

Introduced tree at Mahabaleshwar, but it is not well established in this area.

FLOWERS: June-September and January-April.

FRUITS: September-November and March-May.

LOCAL NAME: Karanj.

Flemingia Ait. (nom. cons.)

1. Shrubs or undershrubs.....*F. strobilifera*

1. Trailing herbs*F. neilgheriensis*

1. *Flemingia strobilifera* (Linn.) R. Br. ex Ait., Hort. Kew. 2: 4: 350, 1812; Graham, 51; Dalz. & Gibs. 75; FBI 2: 227 (excl. vars.); Birdwood, 407; Cooke, 1: 390 (416).

Hedysarum strobiliferum Linn., Sp. Pl. 764, 1753.

Maughania strobilifera (Linn.) St. Hill ex Li, in Arn. J. Bot. 31: 227, 1944; Mukherjee, J. Bot. Soc. Bengal, 6: 10, 1952; Santapau, 84.

Usually common in shady undergrowth of the forests.

FLOWERS & FRUITS: December-April.

2. *Flemingia neilgheriensis* Wight ex Cooke, Fl. Bombay Pres. 1:393, 1902.

Maughania neilgheriensis (Benth.) H.L. Li, in J. Bot. 31 (4): 227, 1944.

F. vestita var. *neilgheriensis* Benth. ex Baker, in Fl. Brit. India, 2: 230, 1876.

Rather rare in rocky ground near the park and on slopes near the lake.

Atylosia Wight & Arn.

1. Leaves obovate *A. lineata*
1. Leaves linear-oblongate.....*A. sericea*

1. ***Atylosia lineata*** Wight & Arn. Prodr. 258, 1834; FBI 2: 213; Lisboa, 212; Birdwood, 407; Nairne 90; Cooke, 1: 382 (408); Santapau, 83.

A. lawii Wight, Icon. t. 93, 2838; Graham, 53; Dalz. & Gibs. 74: Lisboa, 212.

Fairly common on open slopes along Lingmala and on way to Panchgani.

Distribution: Bhilar, Lingmala.

FLOWERS & FRUITS: January-May.

2. ***Atylosia sericea*** Benth. ex Baker, in Fl. Brit. Ind. 2: 213, 1876; Birdwood, 407; Cooke, 1: 383 (408); Santapau, 83.

A gregarious shrub growing on open grasslands between Mahabaleshwar and Panchgani and also at Lingmala.

FLOWERS & FRUITS: October-April.

Spec. seen: L. J. Sedgwick—4744.

Nogra Merr.

1. ***Nogra simplicifolia*** (Dalz.) comb. nov.

Galactia simplicifolia Dalz., In Kew J. Bot. 3: 209, 1851; Dalz. & Gibs. 69.

Grona dalzellii Baker, in Fl. Brit. Ind. 2: 191, 1876; Cooke, 1: 368 (392).

A rare species found among the forest undergrowth.

FLOWERS & FRUITS: September-October.

Dumasia DC.

1. ***Dumasia villosa*** DC., Mem. Legum. 257, t. 44, 1825; FBI 2: 183; Birdwood, 407; Cooke, 1: 361.

D. congesta Graham ex Wight & Arn., Prodr. 206, 1840.

Rather rare species occasionally found on exposed rocky grounds or in grasslands.

Canavalia DC.

1. ***Canavalia microcarpa*** (DC.) Piper, in Proc. Bot. Soc. Wash. 30: 177, 1917; Chatterjee, in J. Ind. Bot. Soc. 28: 92, 1949.

Lablab microcarpus DC. Prodr. 2: 402, 1825.

C. turgida Graham ex Miq. Fl. Ind. Bot. 1: 215, 1855.

C. enciformis Baker var. *turgida* Baker, FBI 2: 196, 1876; Birdwood, 407.

This species has been reported by Woodrow from Western scrap of Mahabaleshwar, under *C. stocksii* Dalz. (J. Bombay nat. Hist. Soc. 11: 424, 1897). D. Chatterjee does not recognise this species and prefers to keep it merged under common *Canavalia* found in Western India, which is mentioned above.

FLOWERS & FRUITS: October.

Erythrina Linn.

1. ***Erythrina stricta*** Roxb. Fl. Ind. 3: 251, 1832; Graham, 54; Dalz. & Gibs. 70; FBI 2: 189; Cooke, 367 (391); Santapau, 75.

Micropteryx stricta Walp. in Linnaea 13: 740, 1839.

There are a few trees along Fitzgerald Ghat.

FLOWERS: February-May.

FRUITS: June-July.

LOCAL NAME: Pangara.

Derris Lour.

1. ***Derris scandens*** (Roxb.) Benth. in J. Linn. Soc. 4: suppl. 103, 1860; FBI 2: 240; Nairne, 93; Cooke, 1: 404 (430); Santapau, 87.

Dalbergia scandens Roxb. Cor. Pl. 2: t. 102, 1798; Graham, 55.

Brachypterum scandens Benth. in Ann. Wien. Mus. 2: 101, 1840; Dalz. & Gibs. 76.

Commonly found near the banks of water springs or near marshy places, in bloom at the beginning of the monsoon.

FLOWERS: June-August.

FRUITS: July-December.

LOCAL NAME: Mothi Sirili.

Cultivated at Dr. Hakim's Bhilar estate. This is a very beautiful tree.

FLOWERS: March-June.

FRUITS: June-September.

Wagatea Dalz.

CAESALPINIACEAE

- 1. Leaves simply pinnate..... 2
- 2. Corolla with 5 perfect petals.....*Cassia*
- 2. Petals 0 *Saraca*
- 1. Leaves bipinnate or unifoliate and bilobed....
- 3
- 3. Prickly straggler *Wagatea*
- 3. Trees *Bauhinia*

Cassia Linn.

1. *Cassia fistula* Linn. Sp. Pl. 377, 1753; Graham, 62; Dalz. & Gibs. 80; Birdwood, 408; Woodrow, 11: 427; Nairne, 96; Cooke, 1: 417 (444); Santapau, 90.

C. rhombifolia Roxb. Fl. Ind. 2: 334, 1832; Wight, Icon. t. 269.

Not a common tree. Often seen in the valleys near human habitation and along the sides of streams. In hot season the tree becomes leafless and bears bright yellow flowers in drooping racemes which make it very conspicuous and attractive.

FLOWERS: March-June.

FRUITS: All round the year.

LOCAL NAME: Bahava.

Saraca Linn.

Saraca asoka (Roxb.) De Wilde, Blumea 15: 393, 1968.

Jonesia asoca Roxb. in As. Res. 4: 355, 1795; Graham, Cat. Bombay Pl. 62, 1839. Dalz. & Gibs. 82; Wight, Icon. t. 206, 1839.

Saraca indica (non Linn. Mant. 1: 98; 1767) auct., Bedd., Fl. Sylv. t. 57, 1870; FBI 2: 271; Nairne, 98; Cooke, 1: 429 (456); Santapau, 92.

1. *Wagatea spicata* Dalz. in Kew Journ. Bot. 3: 89, 1851; Dalz. & Gibs. 80; FBI 2: 261; Birdwood, 408; Woodrow, 11: 427; Nairne, 96; Cooke, 1: 416 (443); Santapau, 90.

C. digyna Graham cat. 60, 1839 (non Rottl. 1803).

Armed woody climber, common on the Fitzgerald Ghat, between 6th and 7th milestones. Very attractive when in bloom with yellowish red flowers grouped in conelike spikes.

FLOWERS: December-January.

LOCAL NAME: Wagati.

Bauhinia Linn.

- 1. Leaves less than 3 cm. *B. galpinii*
- 1. Leaves more than 3 cm. *B. racemosa*

1. *Bauhinia galpinii* N. E. Brown, in Garden Chron. 9: 748; 1891.

A shrub with small leaves. Cultivated at Bhilar.

FLOWERS & FRUITS: March-June.

2. *Bauhinia racemosa* Lamk. Encycl. 1: 390, 1783; Graham, 64; Dalz. & Gibs. 82; FBI 2: 276; Birdwood, 408; Woodrow, 11: 428; Nairne, 99; Cooke, 1: 431 (459); Santapau, 92.

Not common. Few trees are found near Bhilar, between Mahabaleshwar and Panchgani.

FLOWERS: March-June.

FRUITS: November.

LOCAL NAME: Apta.

LOCAL USE: Leaves used locally as bidi wrappers.

MIMOSACEAE

- 1. Stamens definite 5-10..... *Mimosa*
- 1. Stamens indefinite 2
- 2. Stamens free *Acacia*
- 2. Stamens monadelphous *Albizzia*

Mimosa Linn.

- 1. *Mimosa hamata* Willd. Sp. Pl. 4: 1033, 1805; Nairne, 102; Cooke, 1: 442 (471); Santapau, 83.

This species has been included here on the basis of single collection of H. M. Chibber, on 17th March, 1908. It has not been located by anybody else.

Acacia Willd.

- 1. Erect trees or shrubs..... *A. latronum*
- 1. Climbing shrubs 2
- 2. Leaflets 12-30 pairs 3
- 3. Pods thick, wrinkled when dry.....
- *A. sinuata*
- 3. Pods thin, not wrinkled when dry.....
- *A. torta*
- 2. Leaflets 40-50 pairs.....*A. pennata*

- 1. *Acacia sinuata* (Lour.) Merr. in Trans. Amer. Phil. Soc. N.S. 24: 186, 1935.

Mimosa sinuata Lour., El. Cochinch. 653, 1790.

M. concinna Willd., Sp. Pl. 4: 1039, 1805.

A. concinnum (Willd.) DC., Prodr. 2: 464, 1825; Graham, 59; Dalz. & Gibson, 87; FBI 2: 296; Birdwood, 408; Nairne, 104; Cooke, T. 1: 450; Santapau, 96.

Acland in his manuscripts has noted this species from Chinaman's falls. This straggling climber is commonly met with on the lower ghats.

FLOWERS: March-July.

FRUITS: Most of the year.

LOCAL NAME: Chikakhai.

- 2. *Acacia latronum* Willd. Sp. Pl. 4: 1077, 1805; Graham, 58; Dalz. & Gibs. 87; FBI 2: 296; Woodrow, 11: 492; Nairne, 103; Cooke, 1: 449 (478).

Included here on the basis of specimen collected by H. M. Chibber (deposited at B.S.I.).

- 3. *Acacia pennata* Willd. Sp. Pl. 4: 1090, 1805; Nairne, 104; Cooke, 1: 451 (480); Talbot, 1: 494.

Rather rare species, occurs along the Fitzgerald Ghat.

FLOWERS & FRUITS: June-August.

- 4. *Acacia torta* (Roxb.) Craib. in Kew Bull. 410, 1915; Santapau, 97.

Mimosa torta Roxb. Fl. Ind. 2: 566, 1832.

A. caesia Wight & Arn. Prodr. 278, 1834 (non Willd. 1805).

This is the commonest *Acacia* at Mahabaleshwar and has been identified as *A. intsia*, in some of the previous works.

Lingmala, Bhilar, Chinaman's falls, Fitzgerald Ghat.

FLOWERS: April-November.

FRUITS: April-January.

LOCAL NAME: Chilari.

Albizzia Durazz

- 1. Pinnae 6-20 pairs, leaflets less than 1 cm, in breadth *A. chinensis*
- 1. Pinnae 2-6 pairs, leaflets exceeding 1 cm. in breadth *A. lucida*

- 1. *Albizzia chinensis* (Osbeck) Merrill, in Am. J. Bot. 3: 575, 1916; Santapau, 98.

Mimosa chinensis Osbeck, Dag. Ostind. Resa 233, 1757.

M. stipulata Roxb. Hort. Beng. 40, 1814 (nom. nud.).

Acacia stipulata (Roxb.) DC. Prodr. 2: 469, 1825.

Albizzia stipulata Boivin, in Encycl. 19 Siecl. 2: 33, 1838; Dalz. & Gibs. 88; FBI 2: 300; Nairne, 105; Cooke, 1: 453 (483), Talbot 1: 499.

Small tree found frequently on Fitzgerald Ghat.

FLOWERS: April-June.

2. *Albizzia lucida* (Roxb.) Benth. in Hook. Lond. J. Bot. 3: 86, 1844; FBI 2: 299; Cooke, 1: 455 (484); Santapau, 98.

Mimosa lucida Roxb. Fl. Ind. 2: 544, 1832.

Introduced tree frequently seen at Lingmala. Dr. J. C. Lisboa (p. 212) has reported *A. odoratissima*, from Mahabaleshwar. In our opinion imperfect specimen of this species has led to this misidentification, as that species does not occur in this locality.

FLOWERS & FRUITS: April.

Spec. seen: Santapau—12509.

ROSACEAE

- 1. Ovary superior; ripe carpels not enclosed in the calyx tube 2
- 2. Carpels solitary *Prunus*
- 2. Carpels many 3
- 3. Ovules 2, pendulous; calyx ebracteate; prickly shrubs *Rubus*
- 3. Ovules solitary, erect; calyx bracteolate; herbaceous plants *Fragaria*
- 1. Ovary inferior; the ripe carpels enclosed in the calyx tube 4
- 4. Prickly shrubs with compound leaves and adnate stipules *Rosa*
- 4. Unarmed trees or shrubs with simple leaves and lateral stipules *Pyrus*

Prunus Linn.

- 1. Calyx 5-lobed 2
- 2. Flowers peduncled; pericarp 2-valved.....
..... *P. amygdalus*
- 2. Flowers sessile; pericarp indehiscent.....
..... *P. persica*
- 1. Calyx 8-12 lobed *P. ceylanica*

1. *Prunus amygdalus* Stock. Bot. Nat. Med. 3: 101, 1812.

Rarely cultivated in gardens, but does not fruit well.

FLOWERS: October-November.

LOCAL NAME: Badam.

2. *Prunus ceylanica* Miq. Fl. Ind. Bot. 1: 366, 1856.

Pygeum ceylanicum Bedd. Fl. Sylv. t. 59, 1870.

P. wighteanum Blume, in Flora, 41: 256, 1858.

Pygeum gardneri Hook. f. in FBI. 2: 321, 1878; Nairne, 106; Cooke, 647; Birdwood, 13; Cooke 1: 458 (488); Talbot, 1: 505, tt. 286-7; Puri & Mahajan, 122; Santapau, 399 & 306.

Pygeum acuminatum Graham, Cat. Bombay Pl. 1839 (non Colabr. 1819); Wight, Icon. t. 993.

Pygeum zeylanicum Dalz. & Gibs. Bombay Pl. 89, 1861; (excl. syn.; non Gaertn. 1788); Lee, 19.

A common middle size tree \pm 15 m tall. According to the local people the bark of this tree causes itching and produces blisters on human body if used as fire wood.

FLOWERS: November.

FRUITS: January-February.

LOCAL NAMES: Daka, Kaula, Kogal.

3. *Prunus persica* (Linn.) Stokes, Bot. Mat. Med. 3: 100, 1812; Benth. & Hook., Gen. Plant. 1: 609, 1865; Birdwood, 13.

Amygdalus persica Linn. Sp. Pl. 472, 1753.

This species is cultivated at Mahabaleshwar. The fruit is used for preparation of Jam and Stew.

FLOWERS: October-November.

LOCAL NAME: Alu.

Rubus Linn.

- 1. Leaves simple.....*R. moluccanus*
- 1. Leaves compound *R. niveus*

1. *Rubus moluccanus* Linn. Sp. Pl. 1197, 1753; Nairne, 106; Cooke, 1: 459 (488); Puri & Mahajan, 122.

R. rugosus Sm. in Res. Cyclop, 30: no. 34, 1819; Graham, 64; Wight, Icon. t. 225; Cooke, 649; Birdwood, 13.

This species is confined to the ravines below old temple.

FLOWERS: May.

LOCAL NAME: Indian Black berry. (Bird-wood).

2. **Rubus nivens** Thunb. Dissert. 9. f. 3, 1781 (non Wall. ex G. Don, 1831).

R. lasiocarpus Sm., in Rees. Cyclop. 30: no. 6, 1819; Graham, 64; Wight, Icon. t. 232; Lisboa, 213; Nairne, 106; Cooke, 649 & 1: 460 (489); Birdwood, 13; Puri & Mahajan, 122.

This species is now extensively cultivated in gardens especially near Yenna Lake. Fruits used for preparation of Jam.

FLOWERS: November.

COMMON NAME: Mahabaleshwar Raspberry.

Fragaria Linn.

1. **Fragaria vesca** Linn. sp. Pl. 494, 1753. Birdwood, 13; Cooke, 462 (492); Puri & Mahajan, 123.

F. elatior Graham, Cat. Bombay Pl. 64, 1839. (non W. & A. 1834), Nairne, 106.

Very extensively cultivated especially along the banks of Yenna River. Fruits are used for Jam.

FLOWERS: March-June.

COMMON NAME: Strawberry.

Rosa Linn.

1. **Rosa multiflora** Thunb. Fl. Jap. 214, 1784; Bot. Mag. t. 1059; Birdwood, 13.

An introduced species of wild rose. Quite common below Yenna lake and on sides of Yenna river.

FLOWERS: Throughout the year.

LOCAL NAME: Jungle gulab.

Pyrus Linn.

- 1. Flowers fascicled or subumbellate..... *P. malus*
- 1. Flowers in few flowered corymbs..... *P. communis*

1. **Pyrus communis** Linn. Sp. Pl. 479, 1753; Cooke, 1: 462 (492); Puri & Mahajan, 123.

This species occurs in cultivation below forest officer's bungalow, near Lingmala, but the fruit size and quality is not good and is of little value.

FLOWERS: March-April.

COMMON NAME: Pear.

2. **Pyrus malus** Linn. Sp. Pl. 479, 1753.

A rarely cultivated tree. Does not bear fruits.

FLOWERS: March-April.

COMMON NAME: Apple.

CRASSULACEAE

Kalanchoe Adans.

1. Corolla reddish purple; calyx glabrous, with triangular lobes *K. pinnata*

1. Corolla white; calyx glandular hairy, with lanceolate lobes *K. olivacea*

1. **Kalanchoe pinnata** (Lamk.) Pers. Syn. 446, 1805; Santapau, 88.

Cotyledon pinnatum Lamk. Encycl. 2: 141, 1786.

Bryophyllum pinnatum (Lamk.) Oken. Allg. Naturgesch. 3: 1966, 1841; Santapau, 293.

B. calycinum Salisb. Par. London, t. 3, 1805 & Bot. Mag. t. 1409, 1811; FBI 2: 413; Graham, 82; Cooke, 1: 465 (494).

Quite frequently seen along the edges of forest and on sides of streams.

FLOWERS: January.

LOCAL NAMES: Ahiravana-Mahiravana, Zakhmhayat, Panphuti, Ghai-pat, phanphul.

2. **Kalanchoe olivacea** Dalz. in Dalz. & Gibs. Bombay Fl. 313, 1861.

A rare species on way to Panchgani. Flowers white with a pink tinge on rocky ledges.

FLOWERS: October-December.

(To be continued)